

# TAB I

# PART 2

Page 1 of 2

<b>VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(f) AND 1.27 (b)) - INDEPENDENT INVENTOR</b>			Docket No. 6014-2
Serial No.	Filing Date	Patent No.	Issue Date
Applicant/ <b>Keith R. Leighton</b> Patentee:			
Invention: <b>HOT LAMINATION PROCESS FOR THE MANUFACTURE COMBINATION CONTACT/CONTACTLESS SMART CARD AND PRODUCT RESULTING THEREFROM</b>			
<p>As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the invention entitled above and described in:</p> <p><input checked="" type="checkbox"/> the specification to be filed herewith.</p> <p><input type="checkbox"/> the application identified above.</p> <p><input type="checkbox"/> the patent identified above.</p> <p>I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who could not be classified as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).</p> <p>Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:</p> <p><input checked="" type="checkbox"/> No such person, concern or organization exists.</p> <p><input type="checkbox"/> Each such person, concern or organization is listed below.</p> <p><b>*NOTE:</b> Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities (37 CFR 1.27)</p>			
FULL NAME _____ ADDRESS _____ <input type="checkbox"/> Individual <input checked="" type="checkbox"/> Small Business Concern <input type="checkbox"/> Nonprofit Organization			
FULL NAME _____ ADDRESS _____ <input type="checkbox"/> Individual <input type="checkbox"/> Small Business Concern <input type="checkbox"/> Nonprofit Organization			
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FULL NAME _____ ADDRESS _____ <input type="checkbox"/> Individual <input type="checkbox"/> Small Business Concern <input type="checkbox"/> Nonprofit Organization			

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I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF INVENTOR Keith LeightonSIGNATURE OF INVENTOR Keith R. Leighton

DATE:

8-19-97

NAME OF INVENTOR \_\_\_\_\_

SIGNATURE OF INVENTOR \_\_\_\_\_

DATE: \_\_\_\_\_

NAME OF INVENTOR \_\_\_\_\_

SIGNATURE OF INVENTOR \_\_\_\_\_

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NAME OF INVENTOR \_\_\_\_\_

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DATE: \_\_\_\_\_

NAME OF INVENTOR \_\_\_\_\_

SIGNATURE OF INVENTOR \_\_\_\_\_

DATE: \_\_\_\_\_

08918582-081997

Express Mail Label No.

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In application of: Keith A. Leighton

Docket No.  
6014-2

## Declaration and Power of Attorney For Patent Application

### English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

**HOT LAMINATION PROCESS FOR THE MANUFACTURE COMBINATION CONTACT/CONTACTLESS SMART CARD AND PRODUCT RESULTING THEREFROM**

the specification of which

(check one)

☒ is attached hereto.

☐ was filed on \_\_\_\_\_ as United States Application No. or PCT International Application Number \_\_\_\_\_ and was amended on \_\_\_\_\_

(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Not Claimed

_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>

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I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional application(s) listed below:

(Application Serial No.)	(Filing Date)
(Application Serial No.)	(Filing Date)
(Application Serial No.)	(Filing Date)

I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112. I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C. F. R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

08/727,789	10/07/96	Pending
(Application Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)
60/024,255	08/21/96	Pending
(Application Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

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Mark A. Watkins, Reg. No. 33,813

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Lorain, Ohio 44053	

Full name of second inventor, if any	
Second inventor's signature	Date
Residence	
Citizenship	
Post Office Address	

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PRINT OF DRAWINGS  
AS ORIGINAL FILED

Fig. 1

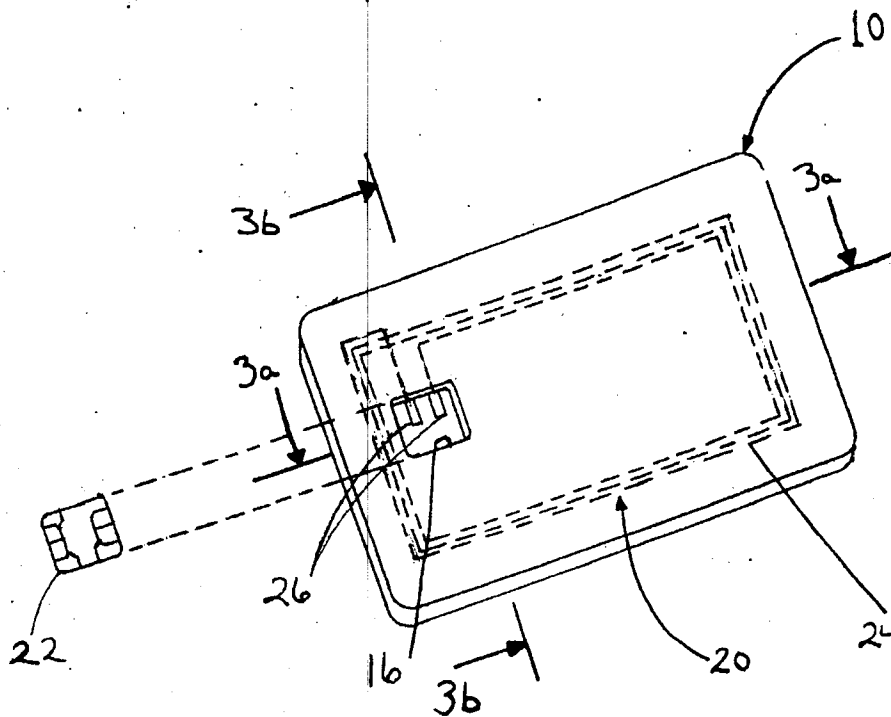
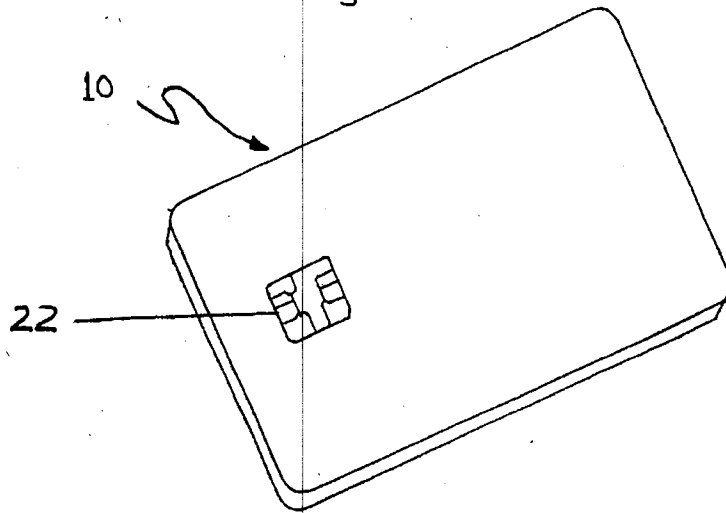
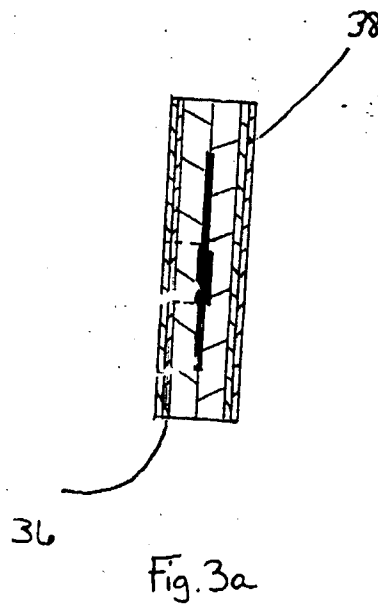
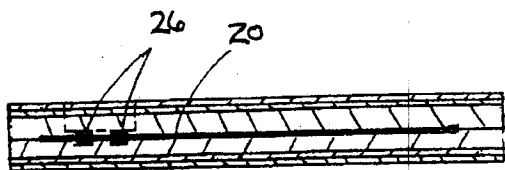
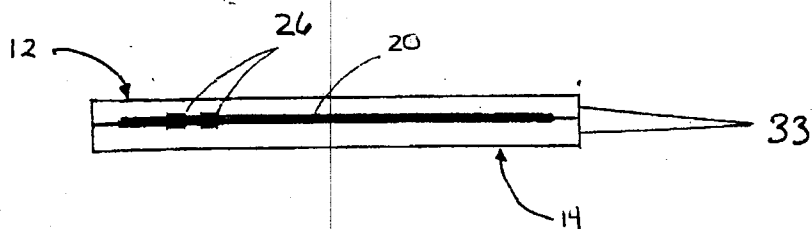


Fig 2

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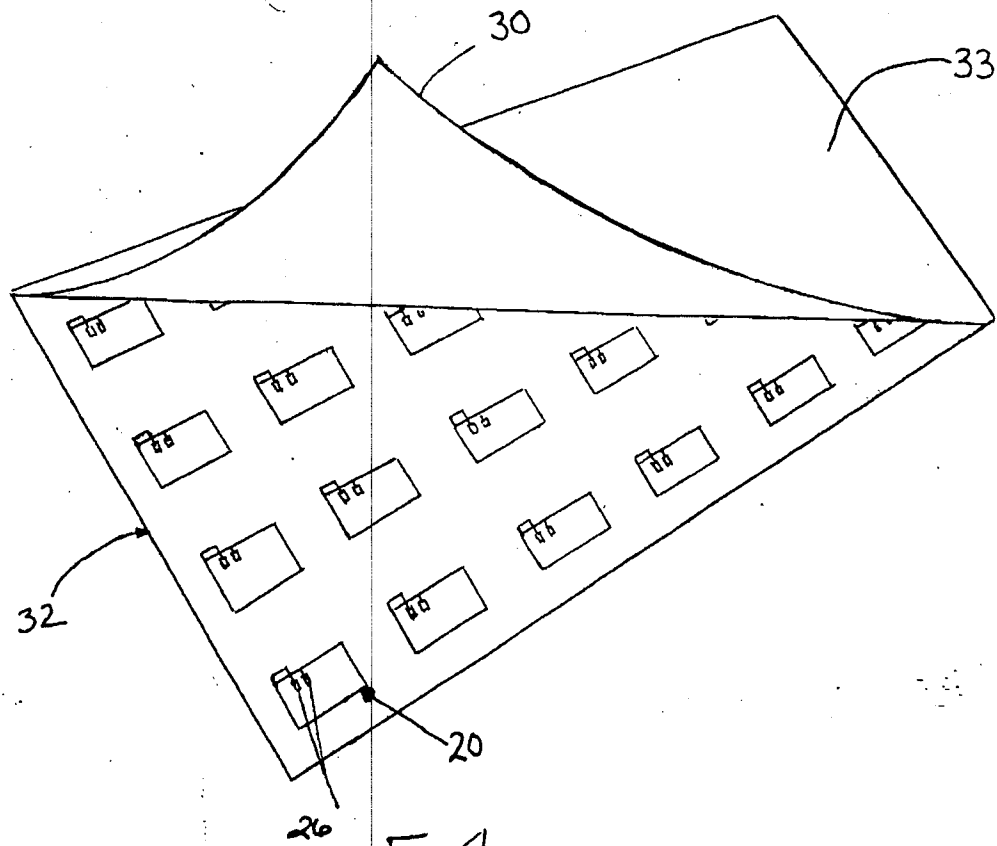
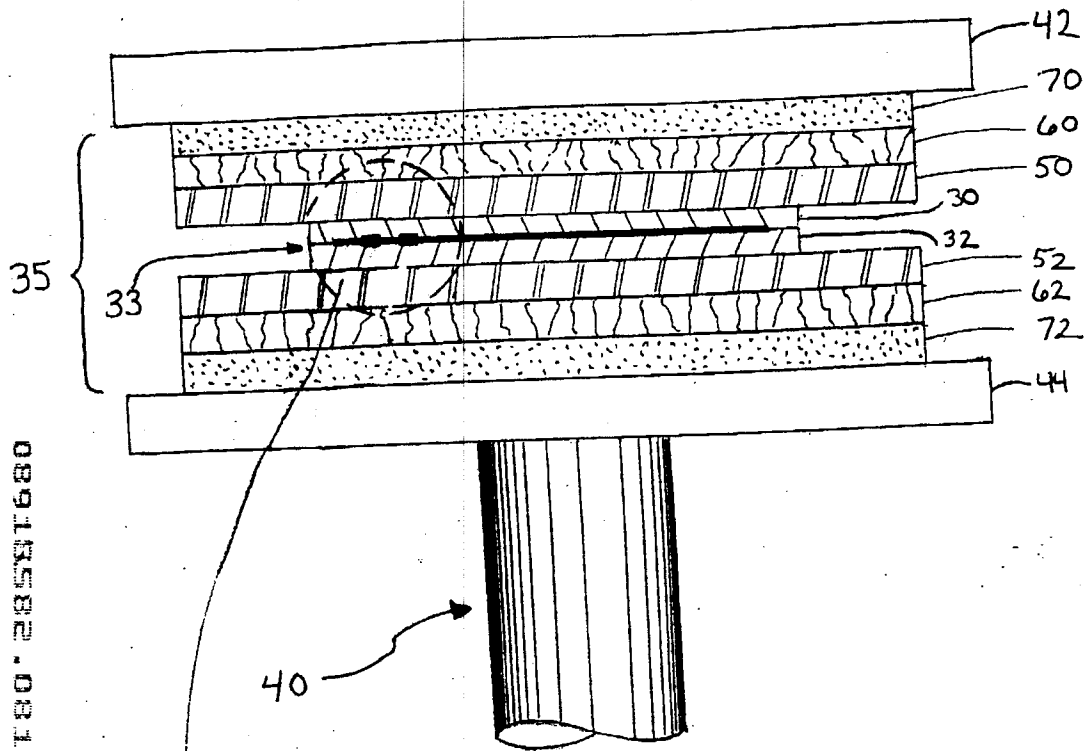


Fig. 4

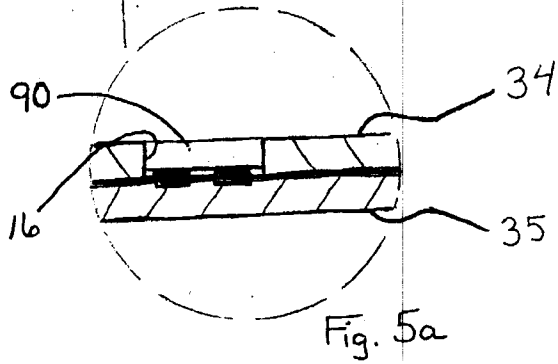
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Fig. 5

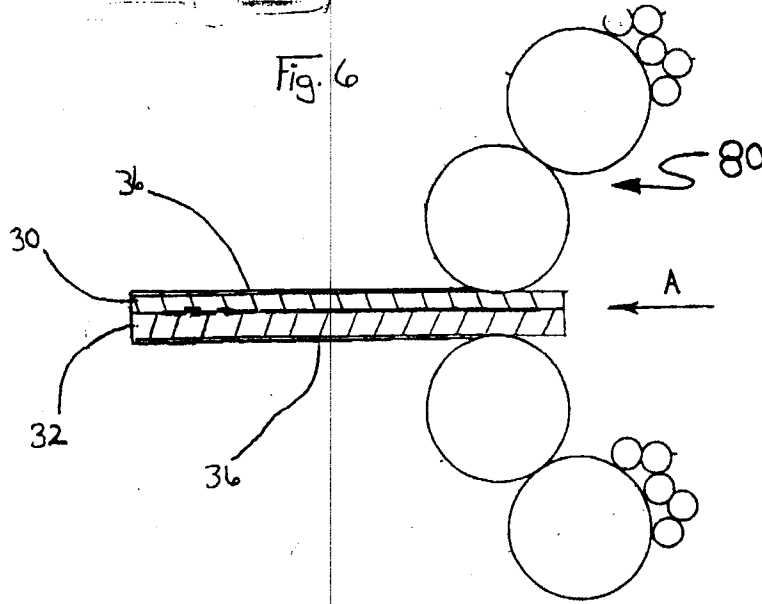


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Fig. 6



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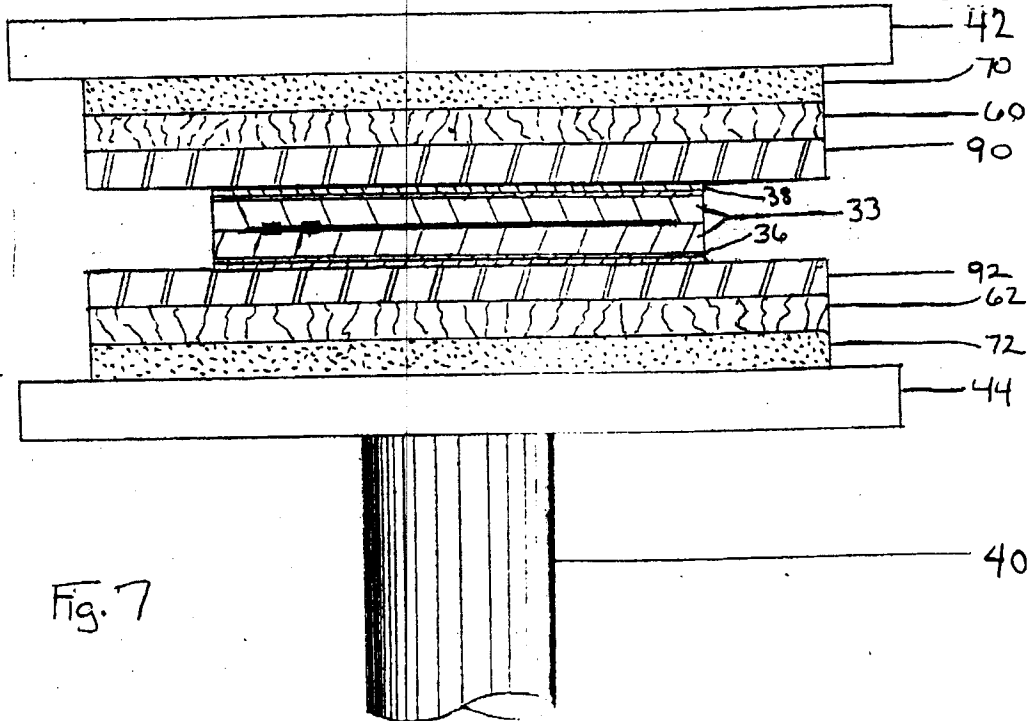
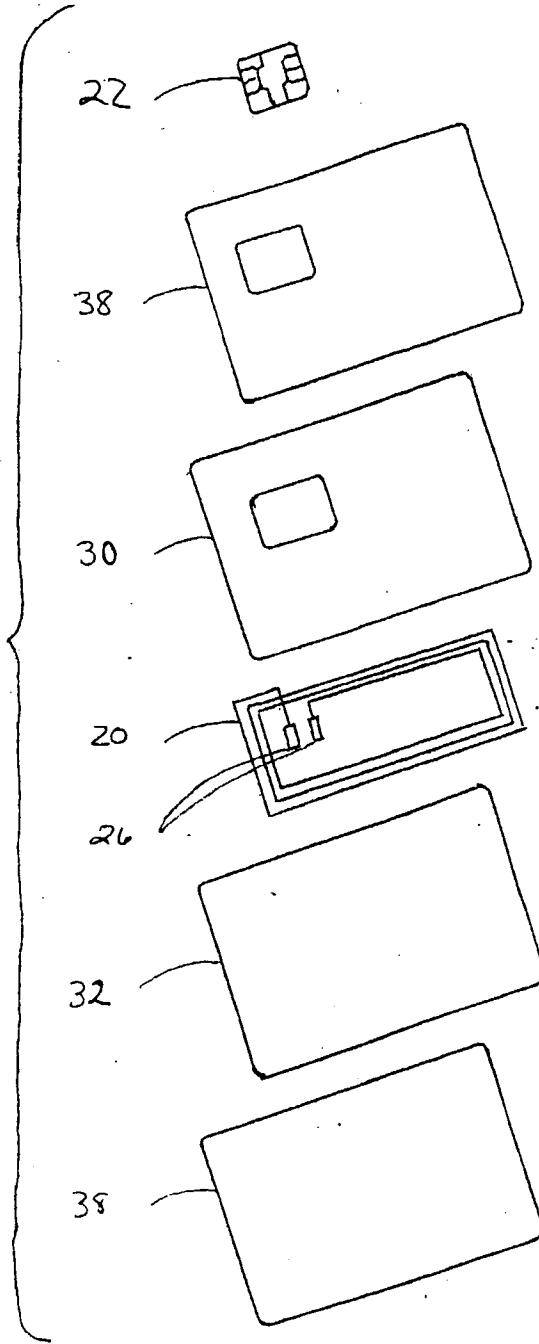


Fig. 7

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Fig.

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#2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Leighton, Keith R. / Examiner:  
Serial No: 08/918,582 / Art Unit:  
Filed: 08/17/97 Date: October 17, 1997  
For: HOT LAMINATION PROCESS FOR THE MANUFACTURE  
COMBINATION CONTACT/CONTACTLESS SMART CARD AND  
PRODUCT RESULTING THEREFROM

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT  
Under 37 CFR § 1.97

This Information Disclosure Statement is filed within three months after the filing date of this application and is therefore timely. 37 CFR §1.97(b).

The filing of this Information Disclosure Statement shall not be construed as a representation that a search has been made (37 CFR §1.56(g)), an admission that the information cited is, or is considered to be, material to patentability or that no other material information exists.

The filing of this Information Disclosure Statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13, at 25.

This Information Disclosure Statement is made to comply with the duty of candor imposed on all individuals associated with the filing or prosecution of this application, as defined by 37 CFR §1.56(c).

A list of the patents and other cited references cited by the applicant are enclosed on two sheets of Form PTO-1449 which are attached and made a part hereof. Copies of the references are enclosed herein. The relevance of each cited reference is thought to have



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been sufficiently discussed in the prosecution of the parent applications and, therefore, has not been recited herein.

This Information Disclosure Statement is based on information contained in the undersigned attorney file as of the date of this statement and is inclusive of the best information known to the undersigned at that date.

The Examiner is kindly requested to consider the Information Disclosure Statement in addition to any references identified by the Examiner as a result of his independent search and examination.

Respectfully submitted,

OLDHAM & OLDHAM CO., LPA

A handwritten signature in cursive script, appearing to read "Mark A. Watkins".

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Attorney Docket: 6014-2







0110

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Applicant: Leighton, Keith R. Examiner:  
Serial No: 08/918,582 Art Unit:  
Filed: 08/17/97 Date: October 17, 1997

For: HOT LAMINATION PROCESS FOR THE MANUFACTURE  
COMBINATION CONTACT/CONTACTLESS SMART CARD AND  
PRODUCT RESULTING THEREFROM

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

TRANSMITTAL

Transmitted herewith:

- 1) Information Disclosure Statement Under 37 CFR § 1.97;
- 2) PTO-Form 1449 and fifteen references; and
- 3) Acknowledgement of Receipt/Return Card

Respectfully submitted,

OLDHAM & OLDHAM CO., LPA

Mark A. Watkins, Esq.  
Registration 33,813

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Akron, OH 44313-7188  
(330) 864-5550

Our File: 6014-2

CERTIFICATE OF MAILING

I hereby certify that this Information Disclosure Statement and all documents referred to as enclosed therein are deposited with the United States Postal Service on this date in an envelope as "Express Mail Post Office to Addressee" Mailing Label No. EM094965196US addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

October 17, 1997  
Date

Mark A. Watkins, Esq.



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/918,582	08/19/97	LEIGHTON	60142

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AKRON OH 44313-7188

MMS1/1118

EXAMINER  
SHERR, D

ART UNIT 2876	PAPER NUMBER 3
------------------	-------------------

DATE MAILED: 11/18/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No. <b>08/918,582</b>	Applicant(s) <b>Leighton</b>
	Examiner <b>Daniel Sherr</b>	Group Art Unit <b>2876</b>

☐ Responsive to communication(s) filed on \_\_\_\_\_

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

**Disposition of Claims**

☒ Claim(s) 1-24 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-24 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

**Application Papers**

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Application/Control Number: 08/918,582

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*Claim Objections*

1. Claims 1, 9, 15 and 21 are objected to because of the following informalities:

Replace "at one" in claim 1, line 7 with --at least one--.

Replace "10" in claim 9, line 2 with --10%--.

Replace "techniques" in claim 15, line 2 with --technique--.

Replace "at one" in claim 21, line 11 with --at least one--.

Appropriate correction is required.

*Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 5-9, 11-17 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haghiri-Tehrani et al (US 4,450,024) in view of Sitzberger (US 3,994,225).

Haghiri-Tehrani et al shows a card (column 5, lines 7-47) which teaches: For claim 1, a hot lamination process for the manufacture of a plastic card, the process comprising the steps of providing first and second plastic core sheets; positioning at least one electronic element between the first and second plastic core sheets to form a layered core; positioning the core in a laminator

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apparatus, heating the core in the laminator, thereafter applying pressure to the core such that at least one electronic element is encapsulated in the core, and thereafter cooling the core in conjunction with laminator pressure being applied to the core, the core including an upper and lower surfaces; and printing on at least one of the upper and lower surfaces of the core such that a layer of ink is applied to the at least one upper and lower surface of the core. For claim 2, a hot lamination process having a step, comprising milling a region of the core to a controlled depth so as to form a cavity which exposes at least one contact pad of the electronic element. For claim 5, a hot lamination process wherein the first and second plastic core sheets are made from a material selected from the group consisting of polyvinyl chloride, polyester, and acrylonitrile-butadiene-styrene, wherein each of the sheets has a thickness in the range of 0.007 inches to 0.024 inches. For claim 6, a hot lamination process wherein the first and second plastic core sheets have a thickness of approximately 0.0125 inches. For claim 7, a hot lamination process where a step is carried out by constructing a first book including the core and at least first and second laminating plates respectively adjacent to the upper and lower surfaces of the core; positioning the book in the laminator apparatus; closing the laminator apparatus and heating the core for a first predetermined amount of time without applying essentially any laminator ram pressure to the core; increasing the laminator ram pressure following the passage of the first predetermined amount of time to apply pressure to the core in conjunction with the heating of the core; cooling the core in the laminator in conjunction with laminator ram pressure being applied to the core. For claim 8, a hot lamination process wherein a step is carried out with a ram pressure that is

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greater than the ram pressure utilized in a step. For claim 9, a hot lamination process wherein the laminator pressure utilized in a step ranges from about 10% to about 40% greater than the ram pressure utilized in a previous step.

Haghiri-Tehrani et al also shows a card (column 5, lines 7-47) which teaches: For claim 11, a hot lamination process having a step comprising positioning the core in a laminator apparatus with a layer of overlamine film on at least one of the upper and lower surfaces of the core in the laminator to thereby form a sheet of plastic card stock. For claim 12, a hot lamination process wherein a step is carried out by heating the core to a temperature in the range of 300 degrees F to 370 degrees F for at least 5 to 10 minutes. For claim 13, a hot lamination process wherein a step is carried out by increasing the laminator pressure to a pressure approximately in the range of 200 p.s.i. to 450 p.s.i. on the core for at least 10 minutes. For claim 14, a hot lamination process wherein a step is carried out utilizing a printing press. For claim 15, a hot lamination process wherein a step is carried out utilizing a coating technique selected from the group consisting of silk screen printing, offset printing, letterpress printing, screen printing, roller coating, spray printing and litho-printing. For claim 16, a hot lamination process where a step is carried out by positioning the core between first and second sheets of overlamine film such that a layer of overlamine film is laminated to both the upper and lower surfaces of the core. For claim 17, a hot lamination process comprising a further step of inserting an electronic contact element into the cavity. For claim 20, a hot lamination process wherein a step is carried out by positioning the core with the layer of overlamine film in the laminator apparatus between first

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and second laminating plates, wherein at least one of the first and second laminating plates includes a highly polished surface in contact with the layer of overlamine film. For claim 21, a hot lamination process for the manufacture of a plastic card, the process comprising the steps of providing first and second plastic core sheets, at least one core sheet having a cavity formed therein; positioning at least one electronic element having at least one electronic subcomponent between the first and second plastic core sheets to form a layered core, the cavity positioned so as to expose the at least one contact pad therein; inserting a spacer into the cavity, the spacers substantially filling the cavity covering the at least one electronic sub-component; positioning the core in a laminator apparatus, heating the core in the laminator, thereafter applying ram pressure to the core such that the at least one electronic element is encapsulated in the core, and thereafter cooling the core in conjunction with laminator ram pressure being applied to the core, the core including an upper and lower surfaces; printing on at least one of the upper and lower surfaces of the core such that a layer of ink is applied to the at least one upper and lower surface of the core; and removing the spacer from the cavity of the core. For claim 22, a hot lamination process wherein the electronic sub-component comprises one or more elements from the group consisting of a microprocessor chip, a contact pad, a transponder and a contact sensor. For claim 23, a plastic card comprising a plastic core including at least one electronic element embedded therein, the core having an upper surface and a lower surface; a coating on at least one of the upper and lower surfaces; and a layer of overlamine film positioned on the at least one coated surface, wherein the card has an overall thickness in the range of approximately 0.028 inches to 0.032

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inches with a variation in overall thickness across the upper and lower surfaces being no greater than approximately 0.0005 inches. For claim 24, a plastic card wherein the core is made from a plastic selected from the group consisting of polyvinyl chloride, polyester, and acrylonitrile-butadiene-styrene.

Haghiri-Tehrani et al fails to show, for claim 1 and 21, the step of cutting at least one card from the sheet of plastic card stock. However, Sitzberger shows a sheet of badge stock (column 1, line 46-63) which teaches, for claim 1 and 21, the step of cutting at least one card from the sheet of plastic card stock. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Sitzberger with the teachings of Haghiri-Tehrani et al because it is profitable to produce badges in a highly efficient manner (column 1, line 29-33).

4. Claims 3-4, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haghiri-Tehrani et al (US 4,450,024) in view of Sitzberger (US 3,994,225) as applied to claims 1-2, 5-9, 11-17 and 20-24 above, and further in view of Hida et al (US 4,841,134).

Haghiri-Tehrani et al as modified by Sitzberger fails to show: For claim 3, a hot lamination process wherein the step of positioning the core in a laminator apparatus is carried out by positioning the core between first and second laminating plates having a matte finish to provide at least one of the upper and lower core surfaces with a correspondingly textured surface. For claim 4, a hot lamination process wherein at least one of the first and second laminating plates includes matte finish to provide both at least one outer surface of the core with a correspondingly textured surface. For claim 10, a hot lamination process wherein at least one of the first and



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second laminating plates in a matte finished laminating plate to provide at least one of the upper and lower surfaces of the core with a corresponding matte finish.

However, Hida et al shows applying a matte on a substrate surface (column 5, lines 6-13) which teaches: For claim 3, a hot lamination process wherein the step of positioning the core in a laminator apparatus is carried out by positioning the core between first and second laminating plates having a matte finish to provide at least one of the upper and lower core surfaces with a correspondingly textured surface. For claim 4, a hot lamination process wherein at least one of the first and second laminating plates includes matte finish to provide both at least one outer surface of the core with a correspondingly textured surface. For claim 10, a hot lamination process wherein at least one of the first and second laminating plates in a matte finished laminating plate to provide at least one of the upper and lower surfaces of the core with a corresponding matte finish. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Hida et al with the teaching of Haghiri-Tehrani et al as modified by Sitzberger because it helps air escape during pressing to prevent unevenness on the substrate surface (column 5, lines 6-13).

5. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haghiri-Tehrani et al (US 4,450,024) in view of Sitzberger (US 3,994,225) as applied to claims 1-2, 5-9, 11-17 and 20-24 above, and further in view of Mundigl et al (US 5,809,633).

Application/Control Number: 08/918,582

Page 8

Art Unit: 2876

Haghiri-Tehrani et al as modified by Sitzberger fails to show, for claims 18 and 19, a hot lamination process wherein at least one electronic element is a micro-chip and an associated circuit board or wire antenna or is a read/write integrated chip and an associated antenna.

However, Mundigl et al shows a carrier module 1 (column 2, lines 36-62) which teaches, for claims 18 and 19, a hot lamination process wherein at least one electronic element is a micro-chip and an associated circuit board or wire antenna or is a read/write integrated chip and an associated antenna. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Mundigl et al to the teachings of Haghiri-Tehrani et al as modified by Sitzberger because it is desirable to transfer data through a coil (column 1, lines 17-21).

#### *Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Yanaka et al (US 5,067,008) and Uenishi et al (US 5,208,450) disclose IC cards.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Daniel H. Sherr** whose telephone number is (703) 305-0267. The examiner can normally be reached between the hours of 7:30 AM to 6:00 PM Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Hajec, can be reached on (703) 308-4075. The fax phone number for this Group is (703)308-5841 or (703) 308-7722.

Application/Control Number: 08/918,582

Page 9

Art Unit: 2876

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [donald.hajec@uspto.gov].

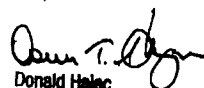
All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Daniel H. Sherr



November 4, 1998



Donald Hajec  
Supervisory Patent Examiner  
Technology Center 2800

<b>Notice of References Cited</b>			Application No. <b>08/918,582</b>		Applicant(s) <b>Leighton</b>	
			Examiner <b>Daniel Sherr</b>		Group Art Unit <b>2876</b>	Page 1 of 1
<b>U.S. PATENT DOCUMENTS</b>						
		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
A		5,067,008	11/91	Yanaka et al	357	81
B		5,208,450	5/93	Uenishi et al	235	492
C		4,450,024	5/84	Haghiri-Tehrani et al	156	108
D		5,809,633	9/98	Mundigl et al	29	600
E		4,841,134	6/89	Hida et al	235	488
F		3,994,225	11/76	Sitzberger	101	426
G						
H						
I						
J						
K						
L						
M						
<b>FOREIGN PATENT DOCUMENTS</b>						
		DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS
N						
O						
P						
Q						
R						
S						
T						
<b>NON-PATENT DOCUMENTS</b>						
		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)				DATE
U						
V						
W						
X						



GP2876#

Practitioner's Docket No. 6014-2

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Leighton, Keith R  
Application No.: 08/918,582  
Filed: 08/19/1997

Group No.: 2876  
Examiner: Sherr, D.

For: Hot Lamination Process for the Manufacture Combination Contact/Contactless Smart Card and Product Resulting Therefrom

Assistant Commissioner for Patents  
Washington, D.C. 20231

#4  
4-2-99  
T. Flower

28C

AMENDMENT TRANSMITTAL

RECEIVED

MAR 25 1999

TECHNOLOGY CENTER 2800

1. Transmitted herewith is an amendment for this application.

STATUS

2. Applicant is a small entity. A statement was already filed.

EXTENSION OF TERM

3. The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply. Applicant petitions for an extension of time under 37 C.F.R. 1.136 (fees: 37 C.F.R. 1.17(a)(1)-(4)) for one month:

03/23/1999 AIBRAHIM 00000066 08918582

Fee: \$55.00

01 FC:215

55.00 DP

CERTIFICATE OF MAILING/TRANSMISSION (37 C.F.R. 1.8(a))

I hereby certify that, on the date shown below, this correspondence is being:

MAILING

- ☒ deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

FACSIMILE :

- ☐ transmitted by facsimile to the Patent and Trademark Office.

Date:

3/15/99

Signature

Mark A. Watkins

(type or print name of person certifying)

(Amendment Transmittal—page 1 of 2)

**FEE FOR CLAIMS**

4. The fee for claims (37 C.F.R. 1.16(b)-(d)) has been calculated as shown below:

	(Col. 1) Claims Remaining After Amendment	(Col. 2) Highest No Previously Paid For	(Col. 3) SMALL ENTITY Present Extra	Rate	Addit. Fee
Total	18 Minus	20	= 0	x \$9 =	\$0
Indep.	2 Minus	3	= 0	x \$39 =	\$0
First Presentation of Multiple Dependent Claim				+ \$130 =	\$0
			Total Addit. Fee		\$0

No additional fee for claims is required.

**FEE PAYMENT**

5. Attached is a check in the sum of \$55.00.

**FEE DEFICIENCY**

6. If any additional extension and/or fee is required, charge Account No. 15-0450.

  
SIGNATURE OF PRACTITIONER

Reg. No. 33,813

Tel. No.: (330) 864-5550

Customer No.: 021324

Mark A. Watkins

Oldham & Oldham Co., L.P.A.  
1225 W. Market St.

Akron, OH 44313-7188



(Pat. 42-11/04 Pub. 605)

FORM 5-8

5-63

Receipt

Attorney's Docket No. 6014-2

PATENT RECEIVED

NOV 30 1999

Publishing Division  
09

In re application of: Leighton

Serial No.: 08 / 918,582

Group No.: 2876

Filed: August 19, 1997

Examiner: Sherr, D.

For: HOT LAMINATION PROCESS FOR THE MANUFACTURE COMBINATION CONTACT/  
CONTACTLESS SMART CARD AND PRODUCT RESULTING THEREFROMCommissioner of Patents and Trademarks  
Washington, D.C. 20231

## REQUEST FOR CORRECTED FILING RECEIPT

1. Attached is a copy of the official filing receipt received from the PTO in the above application for which issuance of a corrected filing receipt is respectfully requested.
2. There is an error with respect to the following data which is:

☒ Incorrectly entered

and/or

☒ omitted.

## Error in

1. ☐ Applicant's name
2. ☐ Applicant's address
3. ☐ Title
4. ☐ Filing Date
5. ☐ Serial Number
6. ☐ Foreign/PCT Application Re:
7. ☒ Other

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

7. see PAGE 2

RECEIVED

MAR 30 1999

Correct data TECHNOLOGY CENTER 2800

## CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8a)

I hereby certify that this correspondence is, on the date shown below, being:

## MAILING

☒ deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231

## FACSIMILE

☐ transmitted by facsimile to the Patent and Trademark Office

Date: March 15, 1999

Signature

Mark A. Watkins

(type or print name of person certifying)

(Request for Corrected Filing Receipt [5-8]—page 1 of 2)

Applicant hereby requests that the Applicant Processing Division's Customer Correction Branch issue a corrected Filing Receipt that this application is a Continuation-in-part of co-pending application 08/727,789. This copendency was indicated in the originally filed specification at page 1, line 16 and 17. Applicant requests that the Correction Branch make the indicated correction and issue a corrected Filing Receipt for this application.

3. (complete the following applicable item A or B).

A. ☒ The correction(s) is/are not due to any error by applicant and no fee is due.

OR

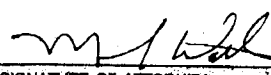
B. ☐ At least one of the above corrections is due to applicant's error and the fee therefor under 37 CFR 1.19(h) of \$25.00 is paid as follows:

☐ Enclosed is check for \$25.00.

☐ Charge Account \_\_\_\_\_ \$25.00.

Reg. No.: 33,813

Tel. No.: (330) 864-5550

  
SIGNATURE OF ATTORNEY

Mark A. Watkins

(type or print name of attorney)  
Oldham & Oldham Co., LPA  
1225 West Market Street

(P.O. Address)  
Akron, Ohio 44313-7188

(Request for Corrected Filing Receipt [5-8]—page 2 of 2)



DK  
PTO-103X  
(Rev. 8-95)

FILING RECEIPT



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

FEB 02 1998

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTORNEY DOCKET NO.	DRWGS	TOT CL	IND CL
08/918,582	08/19/97	3612	\$429.00	60142	6	24	3

60142-2

MARK A WATKINS  
OLDHAM & OLDHAM CO  
1225 WEST MARKET STREET  
AKRON OH 44313-7188

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Application Processing Division's Customer Correction Branch within 10 days of receipt. Please provide a copy of the Filing Receipt with the changes noted thereon.

Applicant(s)

KEITH LEIGHTON, LORAIN, OH.

FOREIGN FILING LICENSE GRANTED 01/26/98

\* SMALL ENTITY \*

TITLE

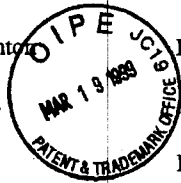
HOT LAMINATION PROCESS FOR THE MANUFACTURE COMBINATION  
CONTACT/CONTACTLESS SMART CARD AND PRODUCT RESULTING THEREFROM

PRELIMINARY CLASS: 156

RECEIVED  
MAR 30 1999  
TECHNOLOGY CENTER 2800

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Keith Leighton Examiner: Sherr, D.  
Serial No. 08/918,582 Art Unit: 2876  
Filed: 8/19/97 Date: March 12, 1999



Title: HOT LAMINATION PROCESS FOR THE MANUFACTURE COMBINATION  
CONTACT/CONTACTLESS SMART CARD AND PRODUCT RESULTING  
THEREFROM

5/A  
4-2-99  
T. Flanagan

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

RESPONSE AND AMENDMENT A

Dear Sir:

RECEIVED

MAR 25 1999

The following response and amendment is responsive to the Office Action mailed November 18, 1998. Also included with this response and amendment is a request for an one-month extension of the shortened statutory period, which expired February 18, 1999.

TECHNOLOGY CENTER 2800

In the Specification:

In the Title, after the word "MANUFACTURE", please insert the words --OF A--.

In page 1, line 13 delete the words "combi-chip" and insert therefore the words --dual function--.

At page 3, line 2, delete the words "COMBI-CHIP" and insert therefore the words --dual function--.

At page 3, line 21 delete the words "combi-chip" and insert therefore the words --dual function--.

At page 7, line 14 delete the words "combi-chip" and insert therefore the words --dual function--.

At page 23, line 4 delete the words "combi-chip" and insert therefore the words --dual function--.

**In the Claims:**

Please delete the following claims: 2, 7, 10, 20, 23, and 24.

1. (Amended) A [hot lamination] process for incorporating at least one electronic element in the manufacture of a plastic card, [said process] comprising the steps of:

(a) providing first and second plastic core sheets;

(b) positioning said at least one electronic element in the absence of a non-electronic carrier directly between said first and second plastic core sheets to form a [layered] core[.];  
said plastic core sheets defining a pair of inner and outer surfaces of said core;

(c) positioning said core in a laminator apparatus, and subjecting said core to a heat and pressure cycle, said heat and pressure cycle comprising the steps of:

(i) heating said core [in said laminator,] for a first period of time;

(ii) [thereafter] applying a first pressure to said core for a second period of time such that said at least one electronic element is encapsulated [in] by said core[.];

(iii) [and thereafter] cooling said core [in conjunction with laminator ram] while applying a second pressure [being applied] to said core [, said core including an upper and lower surfaces];

A-1 (d) [printing on] coating at least one of said [upper and lower] outer surfaces of said core [such that] with a layer of ink [is applied to said at least one upper and lower surface of said core;

(e) cutting at least one card from said sheet of plastic card stock.];

(e) milling a region of said core to a controlled depth so as to form a cavity which exposes at least one contact pad of said electronic element.

2. (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said [step (c) of positioning said core in a] laminator apparatus [is carried out by positioning said core between] has first and second laminating plates, at least one of said first and second laminating plates having a matte finish [to provide at least one of said upper and lower core surfaces with a corresponding] for creating a textured surface on at least one of said outer surfaces of said core.

3 X (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim <sup>2</sup> 3, wherein each of said first and second laminating plates [includes] has a matte finish [to provide both of said upper and lower surfaces of said core with a correspondingly] for creating said textured surface on both of said outer surfaces of said core.

4 X (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said first and second plastic core sheets are made from a material selected from the group consisting of polyvinyl chloride, polyester, and acrylonitrile-butadiene-styrene, [wherein] each of said sheets [has] having a thickness in the range of 0.007 [inches] to 0.024 [inches] inch.

5 X (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 5, wherein said first and second plastic core sheets have a thickness of approximately 0.0125 inch [inches].

cont.  
A-16  
DMS  
6 X (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim <sup>5</sup> 6, wherein [said step (c5) is carried out with a ram] said second pressure [that] is greater than [the ram] said first pressure [utilized in step (c4)].

7 X (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim <sup>6</sup> 7, wherein [the laminator] said second pressure [utilized in step (c5)] ranges from about 10% to about 40% greater than [the ram] said first pressure [utilized in step (c4)].

9 X (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim [7] 9, wherein said [step (c3) is carried out by heating said] core is heated in step (c)(i) to a temperature in the range of [300] 275°F to [370] 400°F and said first period of time is [for] at least five (5) [5 to 10] minutes.

10 X (Amended) [A hot lamination] The process for incorporating at least one electronic element

in the manufacture of a plastic card as recited in claim [12] 1, wherein said [step (c4) is carried out by increasing said laminator ram] first pressure [to a pressure] is approximately [in the range of 200 p.s.i. to] 450 p.s.i. and said second period of time is [for] at least 10 minutes.

~~12~~ (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said step (d) is carried out utilizing a printing press.

~~12~~ (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said step (d) is carried out utilizing a coating technique [techniques] selected from the group consisting of silk screen printing, offset printing, letterpress printing, screen printing, roller coating, spray printing, and litho-printing.

~~12~~ (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said step (e) [is carried out by positioning said core between first and second sheets of overlamine film such that a layer of overlamine film is laminated to both said upper and lower surfaces of said core] of applying a layer of overlamine film comprises the further steps of:

- (a) positioning an overlamine film on at least one ink coated surface of said core;
- (b) subjecting said core to a second heat and pressure cycle comprising the steps of:
  - (i) heating said core to a temperature between approximately 175°F to 300°F for approximately 10 to 25 minutes;
  - (ii) applying approximately 1000 p.s.i. pressure to said core; and
  - (iii) cooling said core to a temperature in the range of approximately 40°F to 65°F for approximately 10 to 25 minutes.

~~15~~ (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said at least one electronic

element is a micro-chip and an associated circuit board antenna or an associated wire antenna.

11/16/04 (Amended) [A hot lamination] The process for incorporating at least one electronic element in the manufacture of a plastic card as recited in claim 1, wherein said at least one electronic element is a read/write integrated chip and an associated antenna.

17/17 (Amended) A [hot lamination] process for incorporating at least one electronic element having at least one electronic subcomponent in the manufacture of a plastic card, [said process] comprising the steps of:

(a) providing first and second plastic core sheets, at least one core sheet having a cavity formed therein;

cont. A3 (b) positioning said at least one electronic element [having at least one electronic subcomponent] in the absence of a non-electronic carrier between said first and second plastic core sheets to form a layered core, said plastic core sheets defining a pair of inner and outer surface of said core and said cavity positioned so as to expose said at least one [contact pad] electronic subcomponent therein;

(c) inserting a spacer into said cavity, said spacer substantially filling said cavity and covering said at least one electronic subcomponent;

(d) positioning said core in a laminator apparatus, and subjecting said core to a heat and pressure cycle, said heat and pressure cycle comprising the steps of:

(i) heating said core [in said laminator,] for a first period of time;

(ii) [thereafter] applying a first [ram] pressure to said core for a second period of time such that said at least one electronic element is encapsulated [in] by said core [,];

(iii) [and thereafter] cooling said core [in conjunction with laminator ram] while applying a second pressure [being applied] to said core [, said core including an upper and lower surfaces];

(e) [printing on] coating at least one of said [upper and lower] outer surfaces of said core [such that] with a layer of ink [is applied to at least one upper and lower surface of said core];

(f) removing said spacer from the cavity of said core [;]

#### **Amendment to Specification**

The correction to the title of the specification is offered to correct a grammar/syntax error.

The specification has been amended at several points to delete the reference to the words "combi-chip" and replacing them therefore with the words "dual function". Applicant is making this amendment to the specification because the term "combi-chip" has become a U.S. Registered Trademark. Applicant's wish to avoid the use of this registered trademark in the application and submit that the amendment as indicated presents no new matter to the specification. Support for the amendment is found at page 3, lines 1-3. Applicant includes with this amendment a printout from the Patent Office website showing the registration data for the mark "combi-chip".

#### **Amendments to Claims**

The Examiner has objected to several formalities in the claims, and has kindly offered suggestions to overcome the objection. The amendments to claims 1, 9, 15, and 21 are responsive to the Examiner's suggestions.

The amendments made to the claims have not been made to avoid the 103(a) rejections. It is believed that the claims as originally submitted are unobvious over the cited patents. The amendments were made to clarify claim language and to insure consistent language throughout both the specification and the claims.

#### **Rejections based on 35 U.S.C. 103**

*Rejection of Claims 1-2, 5-9, 11-17, and 20-24 over Haghiri-Tehrani in view of Sitzberger*

The Examiner has rejected claims 1-2, 11-17, and 20-24 as being unpatentable over Haghiri-Tehrani et al (U.S. 4,450,024) in view of Sitzberger (U.S. 3,994,225) It is the Examiner's position that it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Sitzberger with the teachings of Haghiri-Tehrani et al because it is profitable to produce badges in a highly efficient manner. The applicant respectfully disagrees and respectfully requests that the Examiner reconsider the rejection based on the following argument.

Claims 7 and 20 have been deleted.

Haghiri-Tehrani et al (U.S. 4,450,024) in view of Sitzberger (U.S. 3,994,225) It is the Examiner's position that it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Sitzberger with the teachings of Haghiri-Tehrani et al because it is profitable to produce badges in a highly efficient manner. The applicant respectfully disagrees and respectfully requests that the Examiner reconsider the rejection based on the following argument.

Claims 7 and 20 have been deleted.

From the Examiner's rejection, it is apparent that the Examiner claims to have found each of the elements of applicant's claimed invention anticipated by the '024 patent with the exception of the cutting step. Further, the Examiner apparently claims to have found the cutting step element anticipated by the '225 patent, which the Examiner combines with the '024 patent as a basis for the obviousness rejection under section 103(a). Applicant maintains that the '024 patent does not teach the process of the present application even in the absence of the cutting step.

The '024 patent claims a lamination process for making an electronic card which protects the electronic element of the card by first placing it in a recess formed within a card layer so as to avoid damage to the electronic element from localized pressure applied in the lamination process. The patent then requires that a "buffer zone" be present within the recess. Even the broadest of claims of the '024 patent require a recess and a buffer zone, for and protecting the electronic element. These are required by the '024 invention in order to enable the card assembly to be subjected to a full laminating pressure.

No such protective elements are desired or necessary to the invention of the present application. Further, the invention taught by the '024 patent requires that the electronic element also be placed in a protective carrier disk (6), which is subsequently located within the recess.

The controlled use of a heat and pressure cycle of the present invention eliminates the requirement of both a protective carrier disk for the electronic element and/or a recess or other buffer zone formed in one or more of the card layers for carrying and protecting the electronic element. The process of the present invention allows the electronics-containing core to be



subjected to the full laminating pressure without use of a recess in a card layer. Unlike anything shown in the prior art, the electronic unit is placed directly between two (2) plastic sheets. Admittedly, the '024 patent does make reference to card forming processes which vary pressure with temperature. '024 Patent, col. 6, ln. 30-46. However, there is nothing in the '024 patent which suggests the heat and pressure cycle of the present invention. The '024 patent merely discusses the variation of pressure with temperature, it does not suggest a sequence of steps or the duration of steps which might be used to encapsulate an electronic element by a plastic card. The '024 patent does not discuss a cooling step, nor does it propose a solution to the relative pressures to be applied in the steps of the cycle.

Applicant therefore submits that claims 1-2, 5-9, 11-17, and 20-24 are not obvious over the cited art.

*Rejection of Claims 3-4 and 10 over Haghiri-Tehrani in view of Sitzberger and Hida*

The Examiner has rejected claims 3-4 and 10 as being unpatentable over Haghiri-Tehrani et al in view of Sitzberger and further in view of Hida et al (U.S. 4,841,134). It is the Examiner's position that it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Hida et al with the teaching of Haghiri-Tehrani as modified by Sitzberger because it helps air escape during pressing to prevent unevenness on the substrate surface. The applicant respectfully disagrees and respectfully requests that the Examiner reconsider the rejection based on the following argument.

Claim 10 has been deleted.

Applicant reiterates the argument presented for the rejection of claims 1-2, 11-17, and 20-24. Applicant submits again that as the '024 patent does not present the elements of the present invention, even in lieu of the limitation of the matte finish as recited in claims 3, 4, and 10, the claims are not obvious over the cited art.

*Rejection of claims 18 and 19 over Haghiri-Tehrani in view of Sitzberger and Mondigl*

The Examiner has rejected claims 18 and 19 as being unpatentable over Haghiri-Tehrani in view of Sitzberger and further in view of Mundigl et al (U.S. 5,809,633). It is the Examiner's position that it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Mundigl et al to the teachings of Haghiri-Tehrani et al as modified

by Sitzberger because it is desirable to transfer data through a coil. The applicant respectfully disagrees and respectfully requests that the Examiner reconsider the rejection based on the following argument.

Applicant reiterates the argument presented for the rejection of claims 1-2, 5-9, 11-17, and 20-24. Applicant submits again that as the '024 patent does not present the elements of the present invention, even in lieu of the limitation of the electronic element as recited in claims 18 and 19 the claims are not obvious over the cited art.

**Conclusion**

Based on the foregoing, the applicant earnestly requests that the Examiner reconsider the rejection of the claims and issue a notice of allowance for all claims.

Respectfully submitted,  
OLDHAM & OLDHAM CO., LPA



Mark A. Watkins, Esq.  
Registration No. 33,813

Twin Oaks Estate  
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